CLAIMS

What is claimed is:

1. A method for rendering arbitrary content for display on a particular viewing device, comprising:

(a) receiving content;

(b) assembling the content into an object-oriented structure in a centralized format;

(c) translating the content in the centralized format to a markup language document compatible with a display environment of a viewing device;

(d) formatting the markup language document for display on the viewing device utilizing a descriptor, wherein the descriptor defines parameters of the display environment; and

(e) outputting the formatted markup language document to the viewing device.

2. The method as recited in claim 1, wherein the object-oriented structure is a tree-type structure.

3. The method as recited in claim 1, wherein the content is assembled into the object-oriented structure node by node.

4. The method as recited in claim 1, wherein content that is assembled into a string is parsed for translating the content into the centralized format, wherein the translated content is assembled into the object-oriented structure.

5. The method as recited in claim 1, further comprising receiving content written in the markup language, and outputting the content written in the markup language to the viewing device.

6. The method as recited in claim 1, wherein the centralized format is an XML format.

7. The method as recited in claim 1, further comprising translating the content to a desired language.

8. The method as recited in claim 1, further comprising translating the content to a desired character set.

9. The method as recited in claim 1, wherein the formatting of the markup language document for display on the viewing device is based at least in part on a display screen size of the viewing device.

10. The method as recited in claim 9, wherein the formatting of the markup language document for display on the viewing device includes parsing a table into a format that is viewable on a display of the viewing device.

11. The method as recited in claim 1, wherein the formatting of the markup language document for display on the viewing device includes splitting the markup language document into multiple pages for display on the viewing device.

12. The method as recited in claim 1, wherein the formatting of the markup language document for display on the viewing device includes inserting content in a template.

13. The method as recited in claim 1, wherein the display device is a wireless device.

14. A computer program product for rendering arbitrary content for display on a particular viewing device, comprising:

(a) computer code for receiving content;

(b) computer code for assembling the content into an object-oriented structure in a centralized format;

(c) computer code for translating the content in the centralized format to a markup language document compatible with a display environment of a viewing device;

(d) computer code for formatting the markup language document for display on the viewing device utilizing a descriptor, wherein the descriptor defines parameters of the display environment; and

(e) computer code for outputting the formatted markup language document to the viewing device.

15. A system for rendering arbitrary content for display on a particular viewing device, comprising:

(a) logic for receiving content;

(b) logic for assembling the content into an object-oriented structure in a centralized format;

(c) logic for translating the content in the centralized format to a markup language document compatible with a display environment of a viewing device;

(d) logic for formatting the markup language document for display on the viewing device utilizing a descriptor, wherein the descriptor defines parameters of the display environment; and

(e) logic for outputting the formatted markup language document to the viewing device.

16. A method for rendering arbitrary content for display on a particular viewing device, comprising:

(a) receiving content;

(b) assembling the content into a Document Object Model (DOM) tree in a centralized format;

(c) translating the content in the DOM tree to a markup language document compatible with a display environment of a viewing device;

(d) formatting the markup language document for display on the viewing device;

(e) splitting the markup language document into multiple pages for display on the viewing device; and

(f) outputting the formatted markup language document to the viewing device.

17. The method as recited in claim 16, wherein the content is assembled into the DOM tree node by node.

18. The method as recited in claim 16, wherein content that is assembled into a string is parsed for translating the content into the centralized format, wherein the translated content is assembled into the DOM tree.

19. The method as recited in claim 16, further comprising receiving content written in the markup language, and outputting the content written in the markup language to the viewing device.

20. The method as recited in claim 16, wherein the centralized format is an XML format.

21. The method as recited in claim 16, wherein a descriptor defines parameters of the display environment, wherein the markup language document is formatted for display on the viewing device utilizing the descriptor.

22. The method as recited in claim 16, further comprising translating the content to a desired language.

23. The method as recited in claim 16, further comprising translating the content to a desired character set.

24. The method as recited in claim 16, wherein the splitting of the markup language document is based at least in part on a display screen size of the viewing device.

25. The method as recited in claim 16, wherein splitting of the markup language document is based at least in part on a memory of the viewing device.

26. The method as recited in claim 16, wherein the formatting of the markup language document for display on the viewing device includes parsing a table into a format that is viewable on a display of the viewing device.

27. The method as recited in claim 16, wherein the formatting of the markup language document for display on the viewing device includes inserting content in a template.

28. The method as recited in claim 16, wherein the display device is a wireless device.

29. A computer program product for rendering arbitrary content for display on a particular viewing device, comprising:

(a) computer code for receiving content;

(b) computer code for assembling the content into a Document Object Model (DOM) tree in a centralized format;

(c) computer code for translating the content in the DOM tree to a markup language document compatible with a display environment of a viewing device;

(d) computer code for formatting the markup language document for display on the viewing device;

(e) computer code for splitting the markup language document into multiple pages for display on the viewing device; and

(f) computer code for outputting the formatted markup language document to the viewing device.

30. A system for rendering arbitrary content for display on a particular viewing device, comprising:

(a) logic for receiving content;

(b) logic for assembling the content into a Document Object Model (DOM) tree in a centralized format;

(c) logic for translating the content in the DOM tree to a markup language document compatible with a display environment of a viewing device;

(d) logic for formatting the markup language document for display on the viewing device;

(e) logic for splitting the markup language document into multiple pages for display on the viewing device; and

(f) logic for outputting the formatted markup language document to the viewing device.

31. A method for dividing content into multiple pages for display on a particular viewing device, comprising:

(a) receiving content;

(b) translating the content to a markup language document compatible with a display environment of a viewing device;

(c) splitting the markup language document into multiple items;

(d) parsing the multiple items on multiple pages;

(e) outputting one page of the set of pages to the viewing device, wherein the one page has a pointer to at least one of the other pages.

32. The method as recited in claim 31, wherein each item is placed on a separate page.

33. The method as recited in claim 31, wherein each of the pages includes a header.

34. The method as recited in claim 31, wherein an item is split across multiple pages if the item is too large for a memory of the viewing device.

35. The method as recited in claim 34, wherein a tag of the item is not split.

36. The method as recited in claim 34, wherein a split is made within contents of a tag, wherein the tag is placed on each of the multiple pages.

37. The method as recited in claim 31, wherein an item is split across multiple pages if the item is too large for a display screen size of the viewing device.

38. The method as recited in claim 37, wherein a tag of the item is not split.

39. The method as recited in claim 37, wherein a split is made within contents of a tag, wherein the tag is placed on each of the multiple pages.

40. The method as recited in claim 31, wherein words are not split.

41. The method as recited in claim 31, wherein selected portions of the content are used to organize the pages.

42. The method as recited in claim 31, wherein pages not being output to the viewing device are stored in a cache.

43. The method as recited in claim 42, wherein the cached pages are deleted upon closing of a session.

44. A computer program product for dividing content into multiple pages for display on a particular viewing device, comprising:
(a) computer code for receiving content;
(b) computer code for translating the content to a markup language document compatible with a display environment of a viewing device;
(c) computer code for splitting the markup language document into multiple items;
(d) computer code for parsing the multiple items on multiple pages;
(e) computer code for outputting one page of the set of pages to the viewing device, wherein the one page has a pointer to at least one of the other pages.

45. A system for dividing content into multiple pages for display on a particular viewing device, comprising:
(a) logic for receiving content;
(b) logic for translating the content to a markup language document compatible with a display environment of a viewing device;
(c) logic for splitting the markup language document into multiple items;
(d) logic for parsing the multiple items on multiple pages;
(e) logic for outputting one page of the set of pages to the viewing device, wherein the one page has a pointer to at least one of the other pages.

46. A method for rendering arbitrary content for display on a particular viewing device, comprising:
(a) receiving content;
(b) assembling the content into an object-oriented structure in a centralized format;
(c) translating the content in the centralized format to a markup language document compatible with a display environment of a viewing device;

(d) parsing a table into a format that is viewable on a display of the viewing device;
(e) splitting the markup language document into multiple pages for display on the viewing device;
(f) performing further formatting of the markup language document for display on the viewing device; and
(g) outputting the formatted markup language document to the viewing device.

47. A method for rendering arbitrary content for display on a particular wireless viewing device, comprising:
(a) receiving content;
(b) assembling the content into a Document Object Model (DOM) tree in a centralized format node by node, wherein content that is assembled into a string is parsed for translating the content into the centralized format;
(c) translating the content to a desired language;
(d) translating the content to a desired character set;
(e) translating the content in the DOM tree to a markup language document compatible with a display environment of a wireless viewing device;
(f) parsing a table into a format that is viewable on a display of the viewing device;
(g) splitting the markup language document into multiple pages for display on the viewing device;
(h) performing further formatting of the markup language document for display on the viewing device, wherein the descriptor defines parameters of the display environment;
(i) splitting the markup language document into multiple pages for display on the wireless viewing device, wherein the splitting of the markup language document is based at least in part on a display screen size of the viewing device and at least in part on a memory of the viewing device; and
(j) outputting the formatted markup language document to the wireless viewing device.

48. A method for dividing content into multiple pages for display on a particular viewing device, comprising:

(a) receiving content;

(b) translating the content to a markup language document compatible with a display environment of a viewing device;

(c) splitting the markup language document into multiple items;

(d) parsing the multiple items on multiple pages;

(e) splitting an item across multiple pages if the item is too large for a memory of the viewing device;

(f) splitting an item across multiple pages if the item is too large for a display screen size of the viewing device;

(g) making a split within contents of a tag, wherein the tag is placed on each of the multiple pages, wherein the tag itself is not split;

(h) using selected portions of the content to organize the pages;

(i) outputting one page of the set of pages to the viewing device, wherein the one page has a pointer to at least one of the other pages;

(j) storing pages not being output to the viewing device in a cache; and

(k) deleting the cached pages upon closing of a session.